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ABSTRACT

The suggestions in this booklet address the needs of children between the ages 4-12. The booklet shows how museums can inform and inspire and build skills for both classroom and lifelong learning. Suggestions are given for ways to make family visits to museums a special opportunity to spend time together in a rich learning environment. Museums also help children make the connection between the things they see and already know to things that they are learning in the school and the home. Chapters include: (1) "Foreword"; (2) "Introduction"; (3) "Museums Galore!"; (4) "The Museum Visit: Making the Most of It"; and (5) "Complementary Learning: Schools and Families." An 8-item bibliography section and a 49-item resources section offer additional ideas. (EH)

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MUSEUMS & LEARNING

A GUIDE FOR FAMILY VISITS

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MUSEUMS & LEARNING

A GUIDE FOR FAMILY VISITS

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FOREWORD

Museums are unique community resources to be enjoyed by everyone. Visits to these treasure houses give families a special opportunity to spend time with their children in rich learning environments. And for children, the wonder of seeing the real thing in a museum often allows them to make the connection between the things they see and already know to what they are learning every day at home and in school.

Museums & Learning: A Guide for Family Visits was produced as a collaborative effort between the U.S. Department of Education's Office of Educational Research and Improvement and the Smithsonian Office of Education. Both are committed to the highest quality in learning opportunities and the importance of extending them beyond the school day.

The suggestions in the guide address the needs of children between the ages of 4 and 12. You'll see how museums can inspire as well as inform and build skills for both classroom and lifelong learning. It is our hope that each child's visit to a museum will be a thoughtful learning experience.

Ricky T. Takai
Acting Assistant Secretary
Office of Educational Research and Improvement

J. Dennis O'Connor
Provost
Smithsonian Institution

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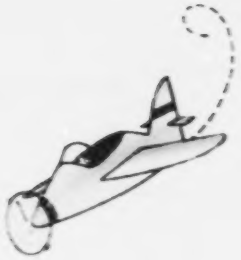

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NATIVE
AMERICAN
HERITAGE

INTRODUCTION

Housing rare collections and treasures of all sorts, museums have the ability to inspire and amaze us. As keepers of our cultural history, museums preserve the memories of different cultures and individuals, their handmade objects—artifacts, inventions, art works, and historical documents. As custodians of our past, museums through their collections and exhibits invite us to become part of our history, while at the same time helping us to better understand our future.

For children and their families, museums provide a perfect opportunity to learn together. Exhibits carefully crafted by museum curators and other staff encourage thought, reaction, and reflection—look at the splash of color in that painting, explore the constellations of the universe from your chair in the planetarium, compose your own music on a synthesizer, or discover why a pendulum swings back and forth governed only by the laws of physics.

This book suggests ways to make museum visits enjoyable learning experiences for families with children ranging in age from 4 to 12 years old. Besides basic information about museums and how they relate to learning, the booklet includes:

- **ACTIVITIES** for children and families to do before, during, and after the museum visit;
- **WAYS TO INSPIRE** children to use their thinking skills while in museums and to carry that knowledge home;
- **IDEAS** for how families and schools can work together to help children learn from museum visits; and
- **A SAMPLING** of museum resources—including books, magazines, and online materials for families, children, teachers, and schools.

So, plan a family adventure to take your children to a museum. The following section contains some basic information about museums and how we can help our children enjoy them as well as learn from them. And remember that you don't have to be an expert in anything, nor do you have to know the answers to all the questions that your children will ask. That's part of the fun of exploring a museum— finding out what it is that excites your children and sharing by looking, listening, talking, and learning together.

MUSEUMS GALORE!

Whether you and your children are interested in art, music, history, natural history, science, technology, or a specific topic such as baseball, dollhouses, gems, or spaceships—chances are there's a museum somewhere just waiting for you.

Museums not only differ by their collections, but also how you learn from them. For example:

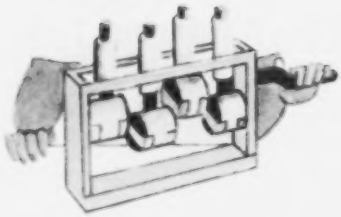
ART museums or galleries are places where we look at the world through the eyes of an artist. We use our imagination to understand what the artist is saying in each work of art. We follow the lines of a sculpture and admire the seamless beauty of statues carved in stone. We are surrounded by light and color and sometimes the jarring images of reality portrayed by the artist's hand and eye. Along with paintings, prints, drawings, and sculptures, many museums have collections of jewelry, furniture, and folk art.

HISTORY museums and archives introduce us to the people, places, and things that have shaped major and minor events of our world and every day life. We see how people lived in other civilizations throughout history. We can wonder how the medieval knights moved around in their suits of armor. We can imagine what it must have been like to be a Pilgrim, a suffragette, or even a child traveling with the family in a covered wagon on the Oregon Trail. We can read documents that shaped life in America and other countries—the Declaration of Independence, the Emancipation Proclamation, peace treaties, and land grants.

TIP BOX

Look in your local telephone book or newspaper for information on special exhibits that may appeal to you and your children. And keep in mind that historic cemeteries, monuments, lighthouses, factories, and even ships have many of the same learning opportunities as do museums.

NATURAL HISTORY museums, with their specimens of animals, fish, birds, plants, reptiles, and other natural forms such as rocks and minerals, give us a chance to understand how the Earth has changed over time and how it has stayed the same. We get to see how massive dinosaurs were, how to tell a turtle's age, or how giant squids change their color and texture. We sometimes can see mummies of people who lived centuries ago.



SCIENCE AND TECHNOLOGY museums explain how things work. We can see working models of inventions and understand where the latest technology comes from and where it's going. Some of these museums even invite you to test out scientific laws: push a button here, pull a lever there, and see for yourself how gravity works. Turn a crank and make your own electricity. Watch how an engine works. Step inside a spaceship. Look at the astronauts' spacesuits and imagine what it's like to walk on the moon or float in space.

CHILDREN'S AND YOUTH museums encourage youngsters to **learn by doing.** PLEASE TOUCH! signs are everywhere. There, families and their children touch, feel, and handle materials that in other museums might be off-limits. Children's museums invite us to do such things as build a miniature model city or dollhouse, trick our eyes by watching people dance under strobe lights, try to measure our shadow, conduct scientific experiments, work on a computer, play musical instruments, or slide down a firefighter's pole in a real firefighter's suit.

ZOOS are great places to encourage children's interest in the natural world and to introduce them to animals, their habitats, and how they live.

AQUARIUMS give youngsters a firsthand look at life in our oceans and lakes. They can learn about coral reefs, starfish, electric eels, giant octopi, and aquatic plants—all in a miniature universe that illustrates nature's balance.

SPECIAL INTEREST museums are devoted to a single topic such as antique cars, baseball, coins, the circus, toys, trolley cars, stamps, the news, or rock and roll.

CULTURAL HERITAGE museums house collections from specific culture groups such as Hispanics, American Indians, Asians, or African-Americans—to name a few.

THESE ARE MUSEUMS, TOO:

BOTANICAL GARDENS and arboretums, with their glass houses and surrounding grounds, introduce children to both familiar and exotic plants and flowers.

NATURE CENTERS help children learn about local plants and wildlife. They are great places to introduce children to natural treasures such as butterflies, bull frogs, and creeping, crawling bugs!

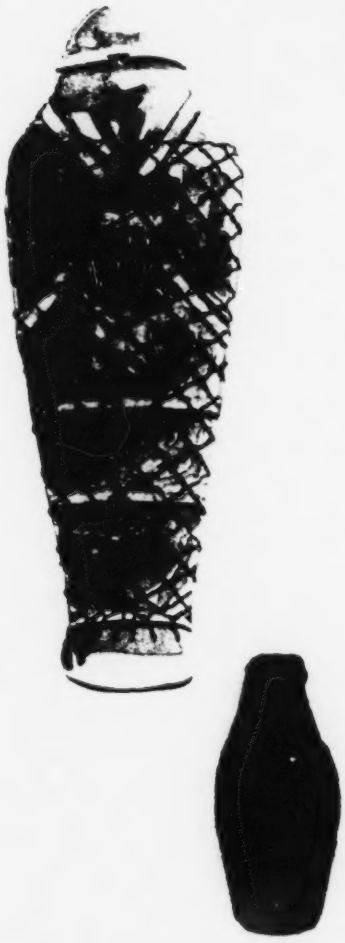
PLANETARIUMS bring the mysteries of the skies to life. Inside planetariums, children can see the entire night sky in all of its glory. They often use telescopes to view the rings of Saturn, and they can step on scales to learn what they would weigh on the moon or on Mars.

RESTORED AREAS such as Colonial Williamsburg in Williamsburg, Virginia, and Old Sturbridge Village in Sturbridge, Massachusetts, recreate whole villages much as they were centuries ago. Visitors mingle with villagers (staff in costume and character) and experience the daily life of people in the past. Children see people shoeing horses and making barrels. Visitors can see how things work, and ask questions of the staff and tour guides.

HISTORIC HOMES give us a glimpse of how people lived in the past. These buildings may have been the home of someone famous or may be of a typical building from a particular period.

ONLINE, TOO! Point... click... and you're there!—the Louvre in Paris, the Smithsonian Institution in Washington, DC, the Exploratorium in San Francisco, the Field Museum of Natural History in Chicago, or the Metropolitan Museum of Art in New York. Virtual museums and exhibits—electronic representations of art and artifacts—offer children a new kind of learning experience. Visits or tours can take place wherever there's a computer connected to the Internet. The sites are educational, informative, and entertaining. Many sites have interactive activities for children as well as connections to other museums around the world. Children and their families can virtually travel the world exploring and learning together. (See the Resources section for a listing of some sites to visit.)

LEARNING FROM OBJECTS



What can children learn from objects in museums? By carefully looking at the objects they're seeing in the exhibits, children's minds become engaged and the objects become learning tools. Careful observation acts as a springboard for new thoughts and ideas, stimulating the use of critical thinking skills.

Some of these skills include:

- **COMPARING** and contrasting—recognizing similarities and differences in objects;
- **IDENTIFYING** and classifying—recognizing and grouping things that belong together;
- **DESCRIBING**—giving verbal or written descriptions of the objects viewed;
- **PREDICTING**—guessing what might happen; and
- **SUMMARIZING**—presenting information that has been gathered in a shortened or condensed form.

Learning from objects is easiest when families know their children's learning style. Research shows that most children learn best through one of three ways: **hearing** (auditory), **seeing** (visual), or **touching\reenacting** (tactile/kinesthetic), and some by a combination of all of these.

Generally, children who are:

- **AUDITORY** learners like to be read to, understand more by hearing explanations of things, and are better at following verbal rather than written instructions;
- **VISUAL** learners often like to read on their own, love books with lots of pictures, like information that is presented on a graph or chart, and like to draw diagrams and pictures; and
- **TACTILE-KINESTHETIC** learners like to touch objects and feel textures, enjoy arts and crafts, and like to be in skits or plays, often pretending to be the person they're studying.

Museum curators consider a variety of learning styles when designing exhibits. Docents or tour guides explain and interpret the exhibits for visitors. All exhibits have written descriptions that tell a story about the objects, and many museums have exhibits that are interactive—hands-on. Tour guides are also available for individuals with visual and hearing impairments.

QUESTIONS, QUESTIONS, AND MORE QUESTIONS

Is it real? How does it work? What is it made of? Children are naturally curious and ask lots of questions. Families can have a good conversation with their children by listening carefully to their questions about the objects in museums and asking them to complete statements such as:

- A good name for this is ...
- What does this remind you of?
- What do you think will happen if ...?
- What if ...?
- What words would you use to describe this object?
- How are these two objects the same? different?
- How does it make you feel?
- Imagine that ...

Talking with and listening to your children helps them gain confidence in their thinking and verbal skills and also helps you to know what your children understand.

COLLECTIONS AND COLLECTORS

Museums hold many of the best collections in the world. Many people donate their precious collections to museums so that they can be shared with the public and also be preserved. In addition to giving collections a home, museums are collectors, adding to their collections as objects become available.

Why do people collect objects? Some people collect objects because they're rare and beautiful. Others collect objects because they remind them of a certain period in time such as their childhood, or of a favorite relative or friend. Occasionally, people start collecting by accident.

A collector of American political items said that he started his collection of Teddy Roosevelt campaign buttons with a Roosevelt bandanna that belonged to his grandfather. A woman who collects tea cups and saucers started her collection while sifting through someone else's unwanted junk (to the seller it's junk, but to the finder it might be a treasure) at a yard sale. A well-known rare book dealer got started as a result of collecting **Wizard of Oz** books as a child. In fact, many people choose their careers based on the collections they had as a child. Serious collectors study the subject matter and acquire better objects and specimens to add to their collections.

MUSEUM

THE MUSEUM VISIT: MAKING THE MOST OF IT

There is no magic formula for visiting museums. A spur-of-the-moment trip can be just as rewarding as a planned visit. But if you have the time, some things that you can do **before, during,** and **after** the visit may help to enrich the experience. Here are a few tips to help make your visit to any museum an enjoyable learning experience.

BEFORE THE VISIT

Children may be more excited about the visit if they are involved in the planning. Ways to do this include:

TALKING about what they will see in the museum, especially if it's the first visit. This conversation may include some basic information about museums and also how objects get there and why people collect objects in the first place.

FINDING out what excites them. If your youngsters are interested in meteors or mummies and your local museum has exhibits on these subjects, you're ready to go! If not, just choose a place that sounds interesting such as a museum in a nearby city. Or look for a museum online.

RELATING what's being learned in school to a museum visit. Children can use the visit to do research or to find out more about a subject they're currently studying. Your local museum may have exhibits that will help bring the subject to life.

REVIEWING personal safety and behavior rules. Make a safety plan with your children in case you get separated, including the role of museum guards and other staff. Talk with your children about how to behave in the museum by explaining that museums have rules of acceptable and unacceptable behavior. For example, art and history museums generally have a no-touching policy because the items displayed are rare and can't be replaced, but children's museums are always hands-on.

THINGS YOU CAN DO BEFORE YOU GO

- Call or write for admission fees, hours, travel directions, and best times for family visits. Ask what days of the week and what hours are the least crowded. Some museums have free admission, while others ask for a small donation. Some have certain days that are free or have discounts for families, senior citizens, students, and children.
- Call or write for accommodations and services for visitors with special needs, including parking, entrances, and access to exhibit areas. Many museums recommend calling at least 2 weeks in advance for such services as sign language, oral, tactile, or cued-speech interpretation; captioning; or publications in braille or large print.
- Check newspapers, your local library, or bookstores for special exhibitions, events, or programs that may appeal to children. Libraries and bookstores often have books and free pamphlets that provide listings and descriptions of family activities that include regional museums.
- If you have access to the Internet, visit the web site of the museum you plan to visit

DURING THE VISIT

The Information Desk is a good "first stop" once you're at the museum. There you'll find floor plans with the location of exhibits, restaurants, restrooms, gift shops, elevators, wheelchair ramps, exits, and places to sit. Materials also are available in foreign languages. You might also ask about self-guided children's and family tour brochures, audio tours, gallery games and activity sheets, and family workshops and programs. Find out the times and locations for hands-on rooms, kids' performances, musical events, storytelling sessions, or museum tours. Next—

- **BE FLEXIBLE** and follow your children's lead. Don't be surprised if your planned visit to see the dinosaur bones is put on hold because the huge elephant has caught your children's attention. Let them enjoy the exhibit at their own pace. Be ready to discuss any questions they may have. If you don't know the answers, jot down the questions in a notebook.
- **TRY TO RELATE** facts about the exhibit that you're seeing to what your children already know. For example, a knight's suit of armor serves the same purpose as a catcher's mask, a bicycle helmet, or shin guards—to protect the body.
- **ASK YOUR CHILDREN** to tell you a story about an object in the exhibit that interests them. Who do you think wore that suit of armor? How did they make it fit? Encourage them to use their imaginations. If labels or wall text provide more information, include it in your discussion.

TIP BOX

Don't forget to bring a notebook to write down all your children's questions!

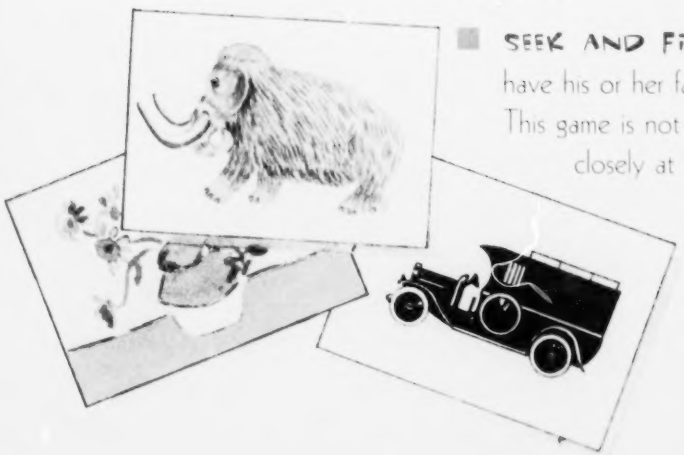
BEST COPY AVAILABLE

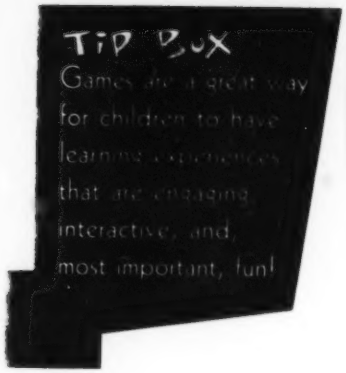
PLAY MUSEUM AND GALLERY GAMES. Children of all ages love to play games. Museum games or treasure hunts focus a museum visit and help to break up the time as you go from exhibit to exhibit. They stimulate your child's curiosity, sharpen observation skills, and generally make the visit more enjoyable. If the museum does not provide games, make up your own:

- **POSTCARD GAMES.** Buy some postcards at the museum gift shop. Then turn your children into detectives and ask them to find the pictured items. Not only will they enjoy the hunt, but they'll be thrilled to discover the real thing. Were the colors the same? the details? the textures? the size? Later at home, the cards can be arranged for a home exhibition.

- **I SPY.** Have youngsters find an object in an exhibit and describe it to other family members so that each one can take a turn guessing what the object is: "I spy something red and brown with sharp edges." or "I spy something that inches its way along the ground."

- **SEEK AND FIND.** Ask your child to find paintings that have his or her favorite colors, shapes, or objects in them. This game is not only fun but teaches children to look very closely at each object. Games like this give children a sense of accomplishment when they successfully find or identify everything asked of them.

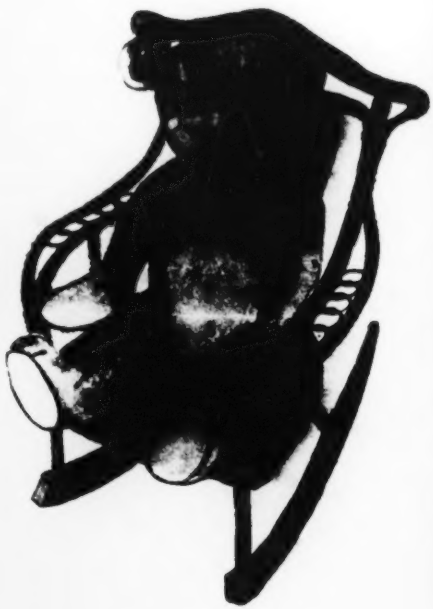



TIP BOX
Games are a great way for children to have learning experiences that are engaging, interactive, and, most important, fun!

- **WHERE IS IT?** Ask your children to find something in the exhibit that is very old... soft... hard... strong... shiny... Or something that feels rough... smooth... hot... slippery... bumpy... itchy... Or something that smells yummy... burnt... sweet...

- **TELL ME WHY OR HOW?** Begin the game by saying something like, "If I could ask one question, I'd ask: Tell me the steps in building an Indian tepee?" The answers are usually within the exhibit. This game is fun in any kind of museum.

VISIT THE MUSEUM GIFT SHOP. Families are sure to find books, posters, toys, games, postcards, and other mementos that remind children of what they saw and expand their knowledge.



CHILD-SIZE YOUR VISIT

Don't try to see everything in one visit. Young children, especially preschoolers and those in early grades, usually learn best in 10- to 15-minute sessions and can be overwhelmed by seeing too many things at one time. Thirty minutes to 1 hour may be the limit. Should your children say things like, "I'm bored," "it's so hot in here," or "when are we going home?"—you know that they've seen enough and it's time to take a break or leave. Plan another visit to see the exhibits you missed.

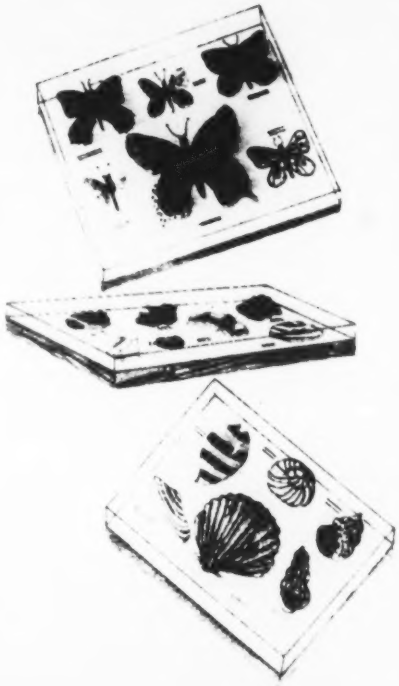
AFTER THE VISIT

Look for opportunities to continue learning after the visit. To reinforce the learning experience, you might:

- **USE** the museum's family guide with ideas for activities at home.
- **RELATE** what your children have seen to things they already know. For example, if your children enjoyed an exhibit on astronauts, then you might talk with them about the first man on the Moon or what we know about the possibility of life on other planets.
- **SUGGEST** that your children start a collection of their favorite objects and build their own home museum. A good way to add to the collection is to look for yard sales or flea markets in your neighborhood. If you're lucky, your collectible treasures may be found for as little as 50 cents!
- **CHECK** television and newspaper listings for shows about auctions or other collectibles. These programs often feature many different objects that are being auctioned, describing their history, value, and context.
- **GO ONLINE.** Many museums maintain web sites that feature information about their exhibits and interactive activities for children. (See the Resources section for some sites to visit.)
- **ENCOURAGE** your children's creativity by suggesting they make a sculpture or mobile of something they saw in the museum from things found at home—newspapers, broken toys, building blocks, or clay. Display it in your home. If you visited a science museum, try some experiments at home with weights

and measures, lights and shadows, or mixing acids and bases (soda and vinegar, lemon and milk). Check your library for books of activities and experiments.

- **ASK** your children to talk to friends and relatives about the visit. What were their favorite things? What didn't they like? And why?
- **CHECK** your notebook and examine your children's unanswered questions. Research the answers and talk them over with your children. See if some of the questions relate to their schoolwork.
- **USE** community resources. Watch for special events, such as festivals and exhibits at your local library, high school, community center, or shopping center. People are resources too—collectors, painters, and backyard naturalists may live in your neighborhood, eager to share their knowledge with children.



COLLECTING AT HOME

Building collections give children plenty of opportunities to practice and learn valuable skills that can be used every day. Most children already have lots of stuff that can make up a collection. It only takes a few dolls, comic books, baseball cards, buttons, stickers, seashells, or rocks to have the beginnings of a super collection that could become a lifetime hobby.

When putting together their collection, ask your children to sort, organize, arrange, and label the objects in their collection. They can organize and rearrange their treasures by size, shape, color, or texture. This will teach them to look at their collection in many ways.

Don't be surprised by how eager your children are to share all the details about the "hows" and "whys" of their collection. Encourage them to discuss the patterns and relationships among their various pieces. This is also the ideal time to applaud their efforts by encouraging them to keep adding to their collection.

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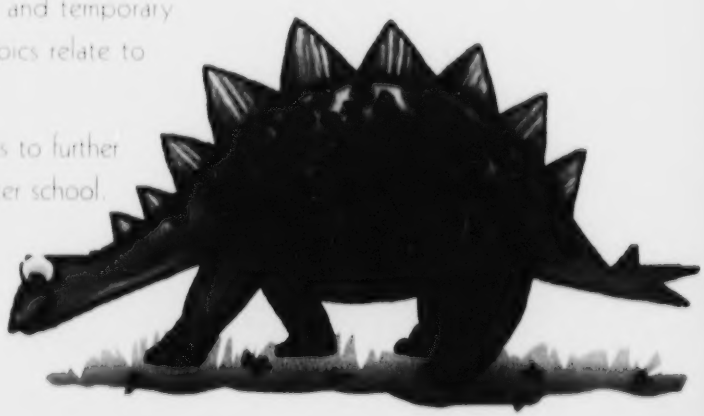
COMPLEMENTARY LEARNING: SCHOOLS AND FAMILIES

Museums are a wonderful meeting ground for the shared interests of schools and families. Field trips and family outings to museums enrich what your children are learning in school and help them link it to the larger world. Schools and teachers, through field trips and other activities, play an important role in introducing students to museums and using them as learning resources. By working together, schools and families can help children make the most of visits to museums. Here's how.

SCHOOLS AND PARENT-TEACHER ORGANIZATIONS CAN:

- **ESTABLISH** a parent committee to help plan field trips to museums.
- **RESEARCH** museums to find out permanent and temporary exhibition schedules, and how exhibition topics relate to the curriculum.
- **FORM PARTNERSHIPS** with local museums to further engage children in learning both during and after school. Museum staff may be willing to visit classes, present workshops for teachers, answer student questions, help students create an in-school exhibition, and share their expertise in innovative ways.



TEACHERS CAN:

- **PREPARE** family members to act as chaperones by telling them the purpose of the visit and how it relates to what their children are learning.
- **ENCOURAGE** families to participate in the planning of field trips. Interested parents can be asked to scout their local community for learning opportunities by identifying local collections, collectors, and researchers.
- **PARTICIPATE** in local museum-sponsored workshops and programs for teachers that enhance the school curriculum. Use museum-prepared lessons and curricula in the classroom. Many museums have education departments or teacher services offices that sponsor workshops, offer free or low-cost materials such as posters, curriculum coordination information, brochures for chaperones, and audiovisual materials. Ask to be placed on their mailing lists.

FAMILIES CAN:

- **BUILD** on and reinforce lessons learned in the classroom by going on family visits to the museum after school, on weekends, and during the summer.
- **VOLUNTEER** to help plan and chaperone field trips to museums.
- **CHECK** the newspapers, listen to the radio, or watch television for special announcements and programs about exhibits and opportunities that reinforce what your children are learning in school or on topics of particular interest to them. Watch for television programs aimed at collectors and hobbyists.
- **ASK** to be put on the mailing lists of museums and become a member of your favorite museum.

CHAPERONES

Chaperones play an important role in the field trip and learning process. Often school groups can visit museums **only** if parents and other adults volunteer to come along. Family members acting as chaperones help make the field trip more fun and enhance learning by encouraging children to listen, look carefully, and participate fully in the tour. Find out:

- the educational objectives of the field trip,
- what has been done in class to prepare for the field trip, and
- special interests of the children in your group.

It's also a good idea to review the school's guidelines for field trips—check with the school office or the school board or parent-teacher organization.

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RESOURCES

Look for this sampling of the many excellent publications for families, children, and teachers in your public library or bookstores. Contact the publisher for others that are available free or at nominal cost.

PUBLICATIONS FOR FAMILIES

A Child's Book of Art: Great Pictures First Words by Lucy Micklethwait (London, New York: Dorling Kindersley, 1993) contains pictures from different periods, cultures, and artists accompanied by a word or phrase to stimulate discussion between parents and children ages 4 to 8.

Bottlecaps to Brushes: Art Activities for Kids by Lynn Steven Engelke (Washington, DC: National Museum of American Art, Smithsonian, 1995) provides a tour of selected museum exhibits, with activities showing how to create art from everyday materials.

Doing Children's Museums: A Guide to 225 Hands-on Museums by Joanne Cleaver (Charlotte, VT: Williamson Publishing, 1988) offers tips on preparing children for museum visits and information about museums around the country.

Minds in Motion: Using Museums to Expand Creative Thinking by Alan Reid Gartenhaus (Caddo Gap Press, 1991) explains how science, history, and art museums can expand creative thinking in children and adults.

Museums: What They Are and How They Work by Cass R. Sandak (New York: Franklin Watts, 1981) discusses types of museums, how they work and who runs them, and how to make the most out of a visit.

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National Gallery of Art Activity Book: 25 Adventures with Art by Maura A. Clarkin (New York: Harry N. Abrams, Inc., Publishers, 1994) focuses on objects from the National Gallery of Art's collections, combining puzzles, games, and hands-on art activities with learning about great works of art.

Online Kids: A Young Surfer's Guide to Cyberspace by Preston Gralla (New York: John Wiley & Sons, Inc., 1996) describes sources of information available online. Includes sites for museums, hobbies, games, and homework.

The Nine-Ton Cat: Behind the Scenes at an Art Museum by Peggy Thomson and Barbara Moore (Boston: Houghton Mifflin, Washington, DC: National Gallery of Art, 1997) takes a behind-the-scenes look at the National Gallery of Art, including its workshops and labs.

PUBLICATIONS FOR TEACHERS

The following four publications are available from the Smithsonian Office of Education, Arts & Industries Building, Room 1163, MRC 402, Washington, DC 20560 or fax (202) 357–2116.

Carousel: A Guide for Teachers and Students Visiting the Smithsonian Institution helps teachers find resources designed especially for them and their students. The guide contains descriptions of permanent exhibitions, tours, and programs for students, professional development programs, and free and low-cost teaching guides. Free.

Collecting Their Thoughts: Using Museums as Resources for Student Writing offers activities to do in the museum or classroom. Grades 6–9. Cost: $5 (covers shipping and handling).

Smithsonian in Your Classroom (formerly **Art to Zoo**) contains teaching ideas for grades 4–9. Published four times every school year. Free subscription.

Smithsonian Resource Guide for Teachers, published biannually, contains brief descriptions of Smithsonian materials, publications, and teaching guides. Cost: $5 (covers shipping and handling).

Teach the Mind, Touch the Spirit: A Guide to Focused Field Trips by Helen H. Voris, Maija Sedzielarz, and Carolyn P. Blackmon (Chicago: Department of Education, Field Museum of Natural History, 1986) describes the structure of field trips and includes pre- and post-visit activities. Includes tips for teachers from teachers, resources, and philosophy, strategies, and techniques to museum teaching. Available for $10 from the Department of Education, Field Museum of Natural History, Roosevelt Road and Lake Shore Drive, Chicago, IL 60605.

True NEEDS, True PARTNERS: Museums and Schools Transforming Education (Washington, DC: Institute of Museum Services, 1996) describes collaborative projects between museums and schools around the country. Available free from the Institute of Museum and Library Services, Room 510, 1100 Pennsylvania Avenue NW, Washington, DC 20506, e-mail: imsinfo@imls.fed.us, or call (202) 606–8536.

PUBLICATIONS FOR CHILDREN

A Kid's Guide to the Smithsonian by Ann Phillips Bay (Washington, DC: Smithsonian Institution Press, 1996) presents highlights from the Air and Space Museum, the Museum of American History, and the Museum of Natural History. Includes tips for planning—and surviving—museum visits.

Are Those Animals REAL? by Judy Cutchins and Ginny Johnston (New York: William Morrow & Company, Inc., 1995) takes a behind-the-scenes look at some of the ways museum artists prepare wildlife displays.

A Visit to the Sesame Street Museum by Joe Mathieu and Liza Alexander (New York: Random House 1987) tells a story about how Sesame Street characters Bert, Ernie, and Grover discover the wonders of art, science, and history during a visit to the Sesame Street Museum.

Digging Up Dinosaurs by Aliki (New York: Harper & Row, 1988) explores what dinosaurs were like and how their skeletons got to the museum.

Let's Go to the Art Museum by Virginia K. Levy (Pompano Beach, FL: Veejay Publications, 1983) introduces children to the basic elements of art.

Mommy, It's a Renoir! by Aline D. Wolf (Altoona, PA: Parent Child Press, 1984) helps children learn to appreciate art.

Museums by Janet Papajani (Chicago: Childrens Press, 1983) describes various types of museums and their collections.

MAGAZINES FOR CHILDREN

Calliope: World History for Youth (Cobblestone Publishing, Inc., 30 Grove St., Peterborough, NH 03458). World history for grades 5–9. Often works with museums on special features. Recommends books, videos, and places to visit.

Cobblestone (Cobblestone Publishing, Inc., 30 Grove St., Peterborough, NH 03458) American history for grades 4–8. Collaborates with museums on issue topics. Recommends books, videos, and places to visit.

Faces: People, Places, and Cultures (Cobblestone Publishing, Inc., 30 Grove St., Peterborough, NH 03458). An anthropology monthly for grades 4–9. Recommends books to read and places to visit.

Muse (The Cricket Magazine Group, P.O. Box 7468, Red Oak, IA 51591-0468, subscriptions 1-800-827-0927) Science, history, and art stories for children ages 8–14. Published in conjunction with Smithsonian magazine.

Odyssey: Adventures in Space (Cobblestone Publishing, Inc., 30 Grove St., Peterborough, NH 03458). Space and earth science magazine for grades 5–9. Recommends science museums to visit.

ELECTRONIC RESOURCES

More and more virtual museums and field trips appear on the Internet every day. Many of the sites listed below have been recommended by museum professionals and librarians working with children. Note sites containing lesson plans for teachers.

MUSEUMS IN GENERAL

Museums Around the World
http://www.nma.gov.au/vlmp/world.html

Smithsonian Institution http://www.si.edu
(This site allows you to access all of the Smithsonian Institution's museums and galleries: Anacostia Museum, Arthur M. Sackler Gallery, Arts and Industries Building, Cooper-Hewitt,

National Design Museum, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Air and Space Museum, National Museum of African Art, National Museum of American Art, National Museum of American History, National Museum of the American Indian, Museum of Natural History, National Portrait Gallery, National Postal Museum, National Zoological Park, and Renwick Gallery.)

World Wide Web Virtual Library Museum, a comprehensive list of museums around the world that are available on the Internet http://palimpsest.stanford.edu/vlmp/

ART

Art Institute of Chicago http://www.artic.edu

Art Museum Network, the official web site for the largest art museums in North America http://www.amn.org

WebMuseum, Paris http://sunsite.unc.edu/louvre

Metropolitan Museum of Art, New York http://www.metmuseum.org/htmlfile/education/kid.html

CHILDREN'S

Children's Museum of Indianapolis http://www.a1.com/children/home.html

HISTORY

Illinois State Museum
At Home in the Heartland exhibit
http://www.museum.state.il.us/exhibits/index.html

Liberty Bell Virtual Museum
http://nw3.nai.net/~spyder/

Library of Congress http://lcweb.loc.gov/exhibits

NATURAL HISTORY

American Museum of Natural History, New York http://www.amnh.org

Field Museum of Natural History, Chicago http://www.fmnh.org

SCIENCE AND TECHNOLOGY

Chicago Academy of Sciences http://www.chias.org

Exploratorium http://www.exploratorium.edu

Franklin Institute Science Museum http://sln.fi.edu

Miami Museum of Science http://www.miamisci.org

Museum of Science and Industry, Chicago http://www.msichicago.org/exhibit/exhome.html

Science Learning Network http://www.sln.org

SPECIAL INTEREST

The Firehouse Museum
http://www.globalinfo.com/noncomm/firehouse/firehouse.HTML

National Baseball Hall of Fame and Museum
http://www.baseballhalloffame.org/

Rock and Roll Hall of Fame and Museum
http://www.rockhall.com

The White House
http://www.whitehouse.gov/WH/

OTHER RESOURCES FOR TEACHERS

Lesson plans and teaching plans from the Smithsonian Institution's many museums and research offices http://educate.si.edu

Going to a Museum? A Teacher's Guide includes a compilation of lesson plans written by teachers for art, language arts, science, social studies, as well as general lesson plans. Also includes a museum field trip planning guide and Internet resources. http://curry.edschool.virginia.edu/curry/class/Museum/Teacher_Guide

Busy Teachers' WebSite, K–12, provides teachers with direct source materials, lesson plans, and related museum sites. http://www.ceismc.gatech.edu/BusyT/TOC.html

AskERIC Lesson Plans include art activities and lesson plans that teachers can use to introduce students to the arts. This site also contains links to other sources of lesson plans. http//ericir.syr.edu/Virtual/Lessons

ArtsEdNet contains lesson plans and curriculum ideas. http://www.artsednet.getty.edu/

Federal Resources for Educational Excellence (FREE) Web site contains hundreds of federal resources for teaching and learning. FREE resources are searchable, and message boards are provided for sharing favorites and for teachers to partner with federal agencies to develop new resources. http://www.ed.gov/free

OTHER SOURCES

ASSOCIATIONS AND ORGANIZATIONS

The following organizations have helpful publications, some are available free or at nominal cost. You may request a publications catalog and ordering information from:

American Association of Museums (AAM). For a bookstore catalog, call (202) 289–9127, fax (202) 289–6578, write to AAM, 1575 Eye Street NW, Suite 400, Washington, DC 20005, or visit their web site and online bookstore at http://www.aam-us.org

Association of Science-Technology Centers, Incorporated (ASTC). To locate science centers around the world via Internet, go to the ASTC web site at http://www.astc.org and select Science Center Travel Guide. The guide provides links to web sites of many science centers and museums, aquariums, planetariums, natural history museums, and children's museums. For a flyer listing the science centers or a publications catalog, write to ASTC, 1025 Vermont Avenue NW, Suite 500, Washington, DC 20005–3516.

National PTA. The National PTA's web site, http://www.pta.org, provides information on parent involvement programs to promote more meaningful parent participation in children's education, including arts in education programs.

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